



Solving food wastage through sustainable consumption and production of the SDG 2030



Databases Assignment

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Background

Background statement:

Food wastage is not just an ethical and economic issue; it is a critical challenge to achieving sustainable development. In line with SDG 12 of the 2030 Agenda, this project, 'Solving Food Wastage Through Sustainable Consumption and Production,' aims to address inefficiencies in the food system, reduce waste at every stage—from farm to fork—and foster responsible practices that safeguard resources for future generations. By implementing data-driven strategies and sustainable innovations, we can reshape how food is produced, consumed, and valued, ensuring that no plate is left empty while preserving our planet's resources.

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Project overview and SDG alignment

- Focus on reducing food waste across the entire supply chain: production, processing, distribution, and consumption.
- Leverage data analytics, sustainable agricultural practices, and consumer awareness campaigns.
- Foster collaboration between producers, retailers, and consumers to minimize waste.
- Create a circular food system that reduces waste and conserves resources.



Problem Statement and Significance

Problem Statement:

Approximately 1/3 of all food produced globally is lost or wasted each year, amounting to about 1.3 billion tons. Food is wasted at various stages—from harvesting and processing to retail and consumption—due to poor infrastructure, lack of awareness, and inefficient systems. Food waste contributes to 8-10% of global greenhouse gas emissions and represents a significant economic loss to both producers and consumers.



Problem Statement and Significance...

Significance of reducing food wastage:

- This will help conserve vital natural resources such as water, land, and energy.
- This can improve profitability for farmers and businesses, while saving households money
- Reduces greenhouse gas emissions, contributing to global efforts against climate change.
- Less waste means more food available to feed a growing global population, helping to fight hunger and malnutrition



Database design and schema

The database is designed to track food production, consumption, and wastage across various stages of the supply chain. It will store data related to food sources, production levels, waste points, and consumption patterns.



Canva

Database design and schema

Database Design and Schema

- Create a database with a database name using the command
 - CREATE DATABASE IF NOT EXISTS #database_name
- Within the database create various tables:
 - Users
 - Food Consumption
 - Food names
 - Food categories
 - Food wastage records
 - Expenses incurred



Canva

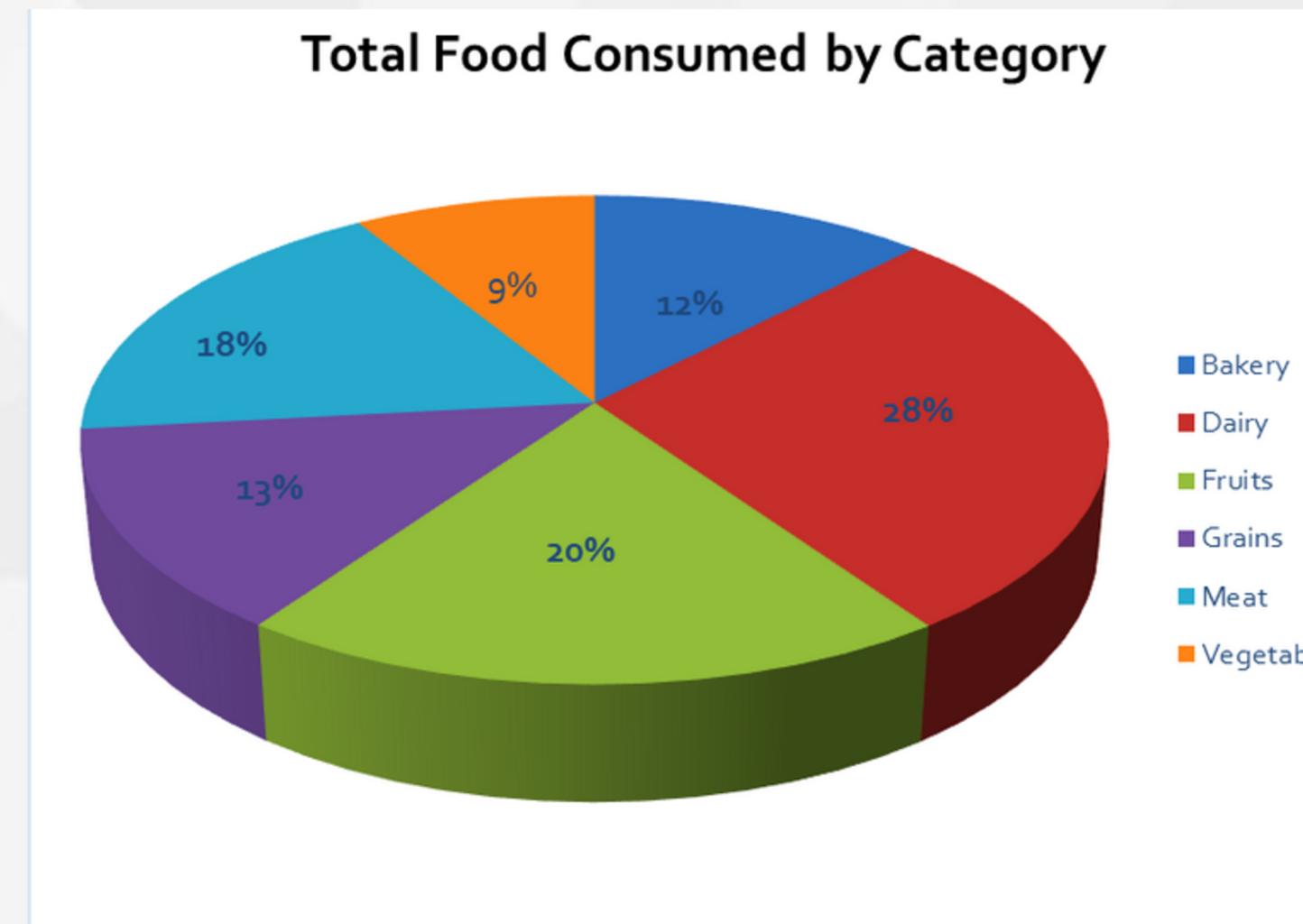
Data Analysis & Insights

- The data shows that majority of the users were wasting the food throughout the various stages either by letting it expire or it being spoiled.
- The total expenses of food wasted amounts to \$ 2 192 .71.
- The total expenses of food consumed amounts to \$ 2 016 .71.
- The food by category shows that dairy is the most consumed (28%) and wasted (30%) product.
- The quantity of dairy products wasted amounted to 765 kg
- Majority of the money is spent on Dairy products such as milk, yoghurt and cheese
- Resulting in most wastage occurring amongst dairy products mostly milk either by spoilage or expiring.



Data Analysis and Insights

- The graphical presentation of data:



Excel dashboard demonstration.

Final remarks :

With so much wastage still occurring in urban areas, it is important to find lasting solutions to the issue of food wastage to reduce the wastage on certain products this can be done through purchasing some food items on demand rather than buying in bulk.

In doing so consumers will be able to track their food consumption and their expenses on certain items.

Resulting in cost saving with minimal food wastage in households and less climate disparities

Dashboard link:

C:\Users\Zakho\Desktop\Week 8 Databases\Data for analysis.xlsx

